

10721057_CLSTITLES

Titles of Most Frequently Occurring Classifications of Patents Returned
From A Search of 10721057 on March 14, 2005

7 361/234 (4 OR, 3 XR)
Class 361 : ELECTRICITY: ELECTRICAL SYSTEMS AND DEVICES

361/230 ELECTRIC CHARGE GENERATING OR CONDUCTING MEANS
(E.G., CHARGING OF GASES)
361/233 .Use of forces of electric charge or field
361/234 ..Pinning

6 257/E21.508 (0 OR, 6 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E21.001 PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE
OR TREATMENT OF SEMICONDUCTOR OR SOLID-STATE

DEVICES OR OF

PARTS THEREOF (EPO)

257/E21.002 .Manufacture or treatment of semiconductor
device (EPO)

depletion

257/E21.04 ..Device having at least one potential-jump
barrier or surface barrier, e.g., PN junction,

treatment

layer, carrier concentration layer (EPO)

257/E21.499 ...Assembling semiconductor devices, e.g.,
packaging, including mounting, encapsulating, or

or

of packaged semiconductor (EPO)

257/E21.506Attaching or detaching leads or other
conductive members, to be used for carrying current to

e.g.,
(EPO)

from device in operation (EPO)

257/E21.507Formation of contacts to semiconductor by
use of metal layers separated by insulating layers,

self-aligned contacts to source/drain or emitter/base

257/E21.508Forming solder bumps (EPO)

6 430/313 (2 OR, 4 XR)

Class 430 : RADIATION IMAGERY CHEMISTRY: PROCESS,
COMPOSITION, OR PRODUCT THEREOF

430/269 IMAGING AFFECTING PHYSICAL PROPERTY OF
RADIATION SENSITIVE MATERIAL, OR PRODUCING NONPLANAR OR
PRINTING SURFACE - PROCESS, COMPOSITION, OR PRODUCT

430/311 .Making electrical device

430/313 ..With formation of resist image, and etching
of substrate or material deposition

5 216/22 (4 OR, 1 XR)

Class 216 : ETCHING A SUBSTRATE: PROCESSES
216/22 FORMING OR TREATING ARTICLE CONTAINING
MAGNETICALLY RESPONSIVE MATERIAL

5 257/E21.304 (0 OR, 5 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES
257/E21.001 PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE
OR TREATMENT OF SEMICONDUCTOR OR SOLID-STATE

DEVICES OR OF

PARTS THEREOF (EPO)

257/E21.002 .Manufacture or treatment of semiconductor
device (EPO)

10721057_CLSTITLES

257/E21.04 ..Device having at least one potential-jump
 barrier or surface barrier, e.g., PN junction,
 depletion

257/E21.085 layer, carrier concentration layer (EPO)
 ...Device having semiconductor body comprising
 without Group IV elements or Group III-V compounds with or
 material on impurities, e.g., doping materials (EPO)

257/E21.211Treatment of semiconductor body using
 material, or process other than deposition of semiconductor
 cutting a substrate, diffusion or alloying of impurity
 radiation treatment (EPO)

257/E21.214To change their surface-physical
 layers on characteristics or shape, e.g., etching, polishing,
 (EPO)

257/E21.294Deposition/post-treatment of
 noninsulating, e.g., conductive - or resistive -
 (EPO)

257/E21.3Post treatment (EPO)

257/E21.303Planarization (EPO)

257/E21.304By chemical mechanical polishing (CMP)
 (EPO)

5 257/E21.311 (0 OR; 5 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES
 257/E21.001 PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE
 OR TREATMENT OF SEMICONDUCTOR OR SOLID-STATE
 DEVICES OR OF

257/E21.002 .Manufacture or treatment of semiconductor
 depletion device (EPO)

257/E21.04 ..Device having at least one potential-jump
 barrier or surface barrier, e.g., PN junction,
 (EPO)

257/E21.085 layer, carrier concentration layer (EPO)
 or without ...Device having semiconductor body comprising
 material on Group IV elements or Group III-V compounds with
 material, or impurities, e.g., doping materials (EPO)

257/E21.211Treatment of semiconductor body using
 cutting process other than deposition of semiconductor
 a substrate, diffusion or alloying of impurity
 radiation treatment (EPO)

257/E21.214To change their surface-physical
 layers on characteristics or shape, e.g., etching, polishing,
 (EPO)

257/E21.294Deposition/post-treatment of
 noninsulating, e.g., conductive - or resistive -
 (EPO)

257/E21.3Post treatment (EPO)

257/E21.305Physical or chemical etching of layer,
 e.g., to produce a patterned layer from pre-deposited
 extensive layer (EPO)

257/E21.308By chemical means only (EPO)

257/E21.31By vapor etching only (EPO)

257/E21.311Using plasma (EPO)

5 257/E21.705 (0 OR, 5 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES
Could not find subclass title.

5 257/E25.013 (0 OR, 5 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES
257/E25.001 ASSEMBLIES CONSISTING OF PLURALITY OF
INDIVIDUAL SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES
(EPO)257/E25.002 .All devices being of same type, e.g.,
assemblies of rectifier diodes (EPO)

257/E25.003 ..Devices not having separate containers (EPO)

257/E25.01 ...Device consisting of plurality of
semiconductor or other solid state devices or components
formed in or on common substrate, e.g., integrated

circuit

device (EPO)

257/E25.013Stacked arrangements of devices (EPO)

5 279/128 (0 OR, 5 XR)

Class 279 : CHUCKS OR SOCKETS
279/128 WITH MAGNETIC OR ELECTROSTATIC MEANS

5 451/41 (3 OR, 2 XR)

Class 451 : ABRADING

451/28 ABRADING PROCESS

451/41 .Glass or stone abrading

4 216/41 (0 OR, 4 XR)

Class 216 : ETCHING A SUBSTRATE: PROCESSES

216/41 MASKING OF A SUBSTRATE USING MATERIAL RESISTANT
TO AN ETCHANT (I.E., ETCH RESIST)

4 257/E21.583 (0 OR, 4 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES

257/E21.531 ...For electrical parameters, e.g.,
resistance, deep-levels, CV, diffusions by

electrical means

(EPO)

257/E21.532 .Manufacture or treatment of devices
consisting of plurality of solid-state components

formed in

or on common substrate or of parts thereof;

manufacture of

integrated circuit devices or of parts thereof (EPO)

257/E21.536 ..Manufacture of specific parts of devices
(EPO)257/E21.575 ...Interconnections, comprising conductors and
dielectrics, for carrying current between separate
components within device (EPO)257/E21.576Characterized by formation and post
treatment of dielectrics, e.g., planarizing (EPO)

257/E21.583Planarization; smoothing (EPO)

4 360/126 (4 OR, 0 XR)

Class 360 : DYNAMIC MAGNETIC INFORMATION STORAGE OR
RETRIEVAL

360/324.1 ...Having one film pinned (e.g., spin valve)

10721057_CLSTITLES

360/125 .Head core
360/126 ..Laminated

4 438/622 (3 OR, 1 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/584 COATING WITH ELECTRICALLY OR THERMALLY CONDUCTIVE MATERIAL
438/597 .To form ohmic contact to semiconductive material
438/618 ..Contacting multiple semiconductive regions (i.e., interconnects)
438/622 ...Multiple metal levels, separated by insulating layer (i.e., multiple level metallization)

4 438/624 (0 OR, 4 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/584 COATING WITH ELECTRICALLY OR THERMALLY CONDUCTIVE MATERIAL
438/597 .To form ohmic contact to semiconductive material
438/618 ..Contacting multiple semiconductive regions (i.e., interconnects)
438/622 ...Multiple metal levels, separated by insulating layer (i.e., multiple level metallization)
438/624Separating insulating layer is laminate or composite of plural insulating materials

4 438/637 (1 OR, 3 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/584 COATING WITH ELECTRICALLY OR THERMALLY CONDUCTIVE MATERIAL
438/597 .To form ohmic contact to semiconductive material
438/618 ..Contacting multiple semiconductive regions (i.e., interconnects)
438/622 ...Multiple metal levels, separated by insulating layer (i.e., multiple level metallization)
438/637With formation of opening (i.e., viahole) in insulative layer

4 438/669 (0 OR, 4 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/584 COATING WITH ELECTRICALLY OR THERMALLY CONDUCTIVE MATERIAL
438/597 .To form ohmic contact to semiconductive material
438/669 ..And patterning of conductive layer

4 438/687 (0 OR, 4 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/584 COATING WITH ELECTRICALLY OR THERMALLY CONDUCTIVE MATERIAL
438/597 .To form ohmic contact to semiconductive material
438/687 ..Copper or copper alloy conductor

4 438/691 (0 OR, 4 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

10721057_CLSTITLES

438/689 CHEMICAL ETCHING
438/690 .Combined with the removal of material by
 nonchemical means (e.g., ablating, abrading, etc.)
438/691 ..Combined mechanical and chemical material
 removal

4 438/692 (2 OR, 2 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/689 CHEMICAL ETCHING
438/690 .Combined with the removal of material by
 nonchemical means (e.g., ablating, abrading, etc.)
438/691 ..Combined mechanical and chemical material
 removal
438/692 ...Simultaneous (e.g., chemical-mechanical
 polishing, etc.)

4 438/712 (0 OR, 4 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/689 CHEMICAL ETCHING
438/706 .Vapor phase etching (i.e., dry etching)
438/707 ..Utilizing electromagnetic or wave energy
438/710 ...By creating electric field (e.g., plasma,
 glow discharge, etc.)
438/712 Reactive ion beam etching (i.e., RIBE)

3 29/825 (2 OR, 1 XR)
Class 029 : METAL WORKING
29/592 METHOD OF MECHANICAL MANUFACTURE
29/592.1 .Electrical device making
29/825 ..Conductor or circuit manufacturing

3 134/1 (0 OR, 3 XR)
Class 134 : CLEANING AND LIQUID CONTACT WITH SOLIDS
134/1 .Including application of electrical radiant or
 wave energy to work

3 204/298.15 (0 OR, 3 XR)
Class 204 : CHEMISTRY: ELECTRICAL AND WAVE ENERGY
204/193 APPARATUS
204/298.01 .Coating, forming or etching by sputtering
204/298.02 ..Coating
204/298.15 ...Specified work holder

3 205/123 (1 OR, 2 XR)
Class 205 : ELECTROLYSIS: PROCESSES, COMPOSITIONS USED
 THEREIN, AND METHODS OF PREPARING THE COMPOSITIONS
205/80 ELECTROLYTIC COATING (PROCESS, COMPOSITION AND
 METHOD OF PREPARING COMPOSITION)
205/118 .coating selected area
205/122 ..Specified product produced
205/123 ...Product is semiconductor or includes
 semiconductor

3 216/103 (0 OR, 3 XR)
Class 216 : ETCHING A SUBSTRATE: PROCESSES
216/83 NONGASEOUS PHASE ETCHING OF SUBSTRATE
216/96 .Etching inorganic substrate
216/100 ..Substrate contains elemental metal, alloy
 thereof, or metal compound
216/102 ...Metal is elemental aluminum, an alloy, or

10721057_CLSTITLES
compound thereof

216/103Etchant contains acid

3 216/38 (0 OR, 3 XR)
Class 216 : ETCHING A SUBSTRATE: PROCESSES
216/38 PLANARIZING A NONPLANAR SURFACE

3 216/47 (0 OR, 3 XR)
Class 216 : ETCHING A SUBSTRATE: PROCESSES
216/41 MASKING OF A SUBSTRATE USING MATERIAL RESISTANT
TO AN ETCHANT (I.E., ETCH RESIST)
216/47 .Mask is multilayer resist

3 216/48 (0 OR, 3 XR)
Class 216 : ETCHING A SUBSTRATE: PROCESSES
216/41 MASKING OF A SUBSTRATE USING MATERIAL RESISTANT
TO AN ETCHANT (I.E., ETCH RESIST)
216/48 .Mask is exposed to nonimaging radiation

3 257/E21.175 (0 OR, 3 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E21.001 PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE
OR TREATMENT OF SEMICONDUCTOR OR SOLID-STATE

DEVICES OR OF

PARTS THEREOF (EPO)
257/E21.002 .Manufacture or treatment of semiconductor
device (EPO)
257/E21.04 ..Device having at least one potential-jump
barrier or surface barrier, e.g., PN junction,
depletion layer, carrier concentration layer (EPO)
257/E21.085 ...Device having semiconductor body comprising
Group IV elements or Group III-V compounds with or
without impurities, e.g., doping materials (EPO)
257/E21.158Manufacture of electrode on semiconductor
body using process other than by epitaxial growth,
diffusion of impurities, alloying of impurity
materials, or radiation bombardment (EPO)
257/E21.159Deposition of conductive or insulating
material for electrode conducting electric current
(EPO)
257/E21.174From a liquid, e.g., electrolytic
deposition (EPO)
257/E21.175Using an external electrical current,
i.e., electro-deposition (EPO)

3 257/E21.313 (0 OR, 3 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E21.001 PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE
OR TREATMENT OF SEMICONDUCTOR OR SOLID-STATE

DEVICES OR OF

PARTS THEREOF (EPO)
257/E21.002 .Manufacture or treatment of semiconductor
device (EPO)
257/E21.04 ..Device having at least one potential-jump
barrier or surface barrier, e.g., PN junction,
depletion layer, carrier concentration layer (EPO)
257/E21.085 ...Device having semiconductor body comprising
Group IV elements or Group III-V compounds with
or without

10721057_CLSTITLES

257/E21.211Treatment of semiconductor body using process other than deposition of semiconductor material on material, or a substrate, diffusion or alloying of impurity radiation treatment (EPO)

257/E21.214To change their surface-physical characteristics or shape, e.g., etching, polishing, cutting (EPO)

257/E21.294Deposition/post-treatment of noninsulating, e.g., conductive - or resistive - layers on insulating layers (EPO)

257/E21.3Post treatment (EPO)

257/E21.305Physical or chemical etching of layer, e.g., to produce a patterned layer from pre-deposited extensive layer (EPO)

257/E21.308By chemical means only (EPO)

257/E21.31By vapor etching only (EPO)

257/E21.313Pre- or post-treatment, e.g., anti-corrosion process (EPO)

3 257/E21.531 (0 OR, 3 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES

257/E21.515Involving use of mechanical auxiliary part without use of alloying or soldering process, e.g., pressure contacts (EPO)

257/E21.521 .Testing or measuring during manufacture or treatment or reliability measurement, i.e., testing of parts followed by no processing which modifies parts as such (EPO)

257/E21.529 ..Measuring as part of manufacturing process (EPO)

257/E21.531 ...For electrical parameters, e.g., resistance, deep-levels, CV, diffusions by electrical means (EPO)

3 257/E23.111 (0 OR, 3 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES

257/E23.079 ..For integrated circuit devices, e.g., power bus, number of leads (EPO)

257/E23.08 .Arrangements for cooling, heating, ventilating or temperature compensation; temperature-sensing arrangements (EPO)

257/E23.101 ..Selection of materials, or shaping, to facilitate cooling or heating, e.g., heat sinks (EPO)

257/E23.11 ...Cooling facilitated by selection of materials for device (or materials for thermal expansion adaptation, e.g., carbon) (EPO)

257/E23.111Diamond (EPO)

3 427/97.2 (0 OR, 3 XR)
Class 427 : COATING PROCESSES

427/58 ELECTRICAL PRODUCT PRODUCED

427/96.1 .Integrated circuit, printed circuit, or circuit board

427/97.1 ..Multilayer

427/97.2 ...Coating hole wall

10721057_CLSTTLES

3 430/314 (0 OR, 3 XR)
Class 430 : RADIATION IMAGERY CHEMISTRY: PROCESS,
COMPOSITION, OR PRODUCT THEREOF
430/269 IMAGING AFFECTING PHYSICAL PROPERTY OF
RADIATION SENSITIVE MATERIAL, OR PRODUCING NONPLANAR
OR
PRINTING SURFACE - PROCESS, COMPOSITION, OR PRODUCT
430/311 .Making electrical device
430/313 ..With formation of resist image, and etching
of substrate or material deposition
430/314 ...Etching of substrate and material deposition

3 430/329 (0 OR, 3 XR)
Class 430 : RADIATION IMAGERY CHEMISTRY: PROCESS,
COMPOSITION, OR PRODUCT THEREOF
430/269 IMAGING AFFECTING PHYSICAL PROPERTY OF
RADIATION SENSITIVE MATERIAL, OR PRODUCING NONPLANAR OR
PRINTING SURFACE - PROCESS, COMPOSITION, OR PRODUCT
430/329 .Removal of imaged layers

3 438/474 (1 OR, 2 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS
438/471 GETTERING OF SUBSTRATE
438/473 ..By implanting or irradiating
438/474 ...Ionized radiation (e.g., corpuscular or
plasma treatment, etc.)

3 438/633 (1 OR, 2 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS
438/584 COATING WITH ELECTRICALLY OR THERMALLY
CONDUCTIVE MATERIAL
438/597 ..To form ohmic contact to semiconductive
material
438/618 ...Contacting multiple semiconductive regions
(i.e., interconnects)
438/622 ...Multiple metal levels, separated by
insulating layer (i.e., multiple level metallization)
438/631Having planarization step
438/633Simultaneously by chemical and mechanical
means

3 438/666 (0 OR, 3 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS
438/584 COATING WITH ELECTRICALLY OR THERMALLY
CONDUCTIVE MATERIAL
438/597 ..To form ohmic contact to semiconductive
material
438/666 ...Specified configuration of electrode or
contact

3 438/720 (0 OR, 3 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS
438/689 CHEMICAL ETCHING
438/706 ..Vapor phase etching (i.e., dry etching)
438/707 ..Utilizing electromagnetic or wave energy
438/710 ...By creating electric field (e.g., plasma,
glow discharge, etc.)
438/720Electrically conductive material (e.g.,

10721057_CLSTITLES
metal, conductive oxide, etc.)

3 438/729 (2 OR, 1 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/689 CHEMICAL ETCHING
438/706 .Vapor phase etching (i.e., dry etching)
438/707 ..Utilizing electromagnetic or wave energy
438/710 ...By creating electric field (e.g., plasma,
glow discharge, etc.)
438/729Using specified electrode/susceptor
configuration (e.g., of multiple substrates using
barrel-type susceptor, planar reactor configuration,
etc.)
to generate plasma

3 438/798 (0 OR, 3 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/795 RADIATION OR ENERGY TREATMENT MODIFYING
PROPERTIES OF SEMICONDUCTOR REGION OF SUBSTRATE (E.G.,
THERMAL, CORPUSCULAR, ELECTROMAGNETIC, ETC.)
438/798 .Ionized irradiation (e.g., corpuscular or
plasma treatment, etc.)

3 451/28 (0 OR, 3 XR)
Class 451 : ABRADING
451/28 ABRADING PROCESS

3 451/57 (0 OR, 3 XR)
Class 451 : ABRADING
451/28 ABRADING PROCESS
451/57 .Combined abrading

2 29/603.15 (0 OR, 2 XR)
Class 029 : METAL WORKING
29/592 METHOD OF MECHANICAL MANUFACTURE
29/592.1 .Electrical device making
29/602.1 ..Electromagnet, transformer or inductor
29/603.01 ...Magnetic recording reproducing transducer
(e.g., tape head, core, etc.)
29/603.07Fabricating head structure or component
thereof
29/603.09Including measuring or testing
29/603.13Depositing magnetic layer or coating
29/603.15With etching or machining of magnetic
material

2 34/196 (0 OR, 2 XR)
Class 034 : DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS

34/523 APPARATUS
34/192 .Removable shelf or tray type
34/195 ..With gas or vapor circulation for contact
with treated material
34/196 ...Recirculation of treating gas or vapor

2 34/228 (1 OR, 1 XR)
Class 034 : DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS

34/523 APPARATUS
34/201 .Houses, kilns, and containers
34/218 ..With gas or vapor circulation for contact

10721057_CLSTITLES

with treated material

34/227 ...Gas or vapor flow toward or from treated material entrance or exit

34/228Countercurrent to treated material motion only

2 118/723E (0 OR, 2 XR)

Class 118 : COATING APPARATUS

118/715 GAS OR VAPOR DEPOSITION

118/722 .with treating means (e.g., jarring)

118/723R ..By creating electric field (e.g., gas activation, plasma, etc.)

118/723E ...Having glow discharge electrodes (e.g., DC, AC, RF, etc.)

2 118/728 (0 OR, 2 XR)

Class 118 : COATING APPARATUS

118/715 GAS OR VAPOR DEPOSITION

118/728 .Work support

2 134/104.4 (0 OR, 2 XR)

Class 134 : CLEANING AND LIQUID CONTACT WITH SOLIDS

134/104.2 .With means for collecting escaping material

134/104.4 ..Foreign material separated from liquid

2 134/137 (0 OR, 2 XR)

Class 134 : CLEANING AND LIQUID CONTACT WITH SOLIDS

134/137 .With means to movably mount or movably support the work or work support

2 134/61 (0 OR, 2 XR)

Class 134 : CLEANING AND LIQUID CONTACT WITH SOLIDS

134/61 .Sequential work treating receptacles or stations with means to transfer work or fluid-applying devices

2 148/DIG 135 (0 OR, 2 XR)

Class 148 : METAL TREATMENT

148/DIG 135 REMOVAL OF SUBSTRATE

2 156/345.51 (0 OR, 2 XR)

Class 156 : ADHESIVE BONDING AND MISCELLANEOUS CHEMICAL MANUFACTURE

156/345.1 DIFFERENTIAL FLUID ETCHING APPARATUS

156/345.51 .With workpiece support

2 204/192.12 (0 OR, 2 XR)

Class 204 : CHEMISTRY: ELECTRICAL AND WAVE ENERGY

204/192.1 .Coating, forming or etching by sputtering

204/192.12 ..Glow discharge sputter deposition (e.g., cathode sputtering, etc.)

2 204/192.15 (1 OR, 1 XR)

Class 204 : CHEMISTRY: ELECTRICAL AND WAVE ENERGY

204/192.1 .Coating, forming or etching by sputtering

204/192.12 ..Glow discharge sputter deposition (e.g., cathode sputtering, etc.)

204/192.15 ...Specified deposition material or use

2 204/192.3 (0 OR, 2 XR)

Class 204 : CHEMISTRY: ELECTRICAL AND WAVE ENERGY

204/192.1 .Coating, forming or etching by sputtering

204/192.12 ..Glow discharge sputter deposition (e.g.,

10721057_CLSTITLES

cathode sputtering, etc.)

204/192.15 ...Specified deposition material or use
204/192.3With sputter etching

2 204/298.31 (0 OR, 2 XR)

Class 204 : CHEMISTRY: ELECTRICAL AND WAVE ENERGY
204/193 APPARATUS
204/298.01 .Coating, forming or etching by sputtering
204/298.31 ..Etching

2 205/118 (0 OR, 2 XR)

Class 205 : ELECTROLYSIS: PROCESSES, COMPOSITIONS USED
THEREIN, AND METHODS OF PREPARING THE COMPOSITIONS
205/80 ELECTROLYTIC COATING (PROCESS, COMPOSITION AND
METHOD OF PREPARING COMPOSITION)
205/118 .Coating selected area

2 216/105 (0 OR, 2 XR)

Class 216 : ETCHING A SUBSTRATE: PROCESSES
216/83 NONGASEOUS PHASE ETCHING OF SUBSTRATE
216/96 .Etching inorganic substrate
216/100 ..Substrate contains elemental metal, alloy
thereof, or metal compound
216/105 ...Metal is elemental copper, an alloy, or
compound thereof

2 216/67 (1 OR, 1 XR)

Class 216 : ETCHING A SUBSTRATE: PROCESSES
216/58 GAS PHASE ETCHING OF SUBSTRATE
216/63 .Application of energy to the gaseous etchant
or to the substrate being etched
216/67 ..Using plasma

2 216/88 (0 OR, 2 XR)

Class 216 : ETCHING A SUBSTRATE: PROCESSES
216/83 NONGASEOUS PHASE ETCHING OF SUBSTRATE
216/88 .Using film of etchant between a stationary
surface and a moving surface (e.g., chemical lapping,
etc.)

2 257/673 (0 OR, 2 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES
257/666 LEAD FRAME
257/673 .With bumps on ends of lead fingers to connect
to semiconductor

2 257/690 (2 OR, 0 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES
257/688 .With large area flexible electrodes in press
contact with opposite sides of active semiconductor chip
and surrounded by an insulating element, e.g., ring
257/690 .With contact or lead

2 257/692 (0 OR, 2 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES
257/688 .With large area flexible electrodes in press
contact with opposite sides of active semiconductor
chip
and surrounded by an insulating element, e.g., ring
257/690 .With contact or lead
257/692 ..With particular lead geometry

10721057_CLSTITLES

2 257/700 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/688 .With large area flexible electrodes in press
contact with opposite sides of active semiconductor
chip
and surrounded by an insulating element, e.g., ring
257/690 .With contact or lead
257/700 ..Multiple contact layers separated from each
other by insulator means and forming part of a package or
housing (e.g., plural ceramic layer package)

2 257/723 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/688 .With large area flexible electrodes in press
contact with opposite sides of active semiconductor chip
and surrounded by an insulating element, e.g., ring
257/723 .For plural devices

2 257/E21.001 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E21.001 PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE
OR TREATMENT OF SEMICONDUCTOR OR SOLID-STATE DEVICES OR
OF
PARTS THEREOF (EPO)

2 257/E21.256 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E21.001 PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE
OR TREATMENT OF SEMICONDUCTOR OR SOLID-STATE
DEVICES OR OF
PARTS THEREOF (EPO)

257/E21.002 .Manufacture or treatment of semiconductor
device (EPO)

257/E21.04 ..Device having at least one potential-jump
barrier or surface barrier, e.g., PN junction,
depletion
layer, carrier concentration layer (EPO)

257/E21.085 ...Device having semiconductor body comprising
Group IV elements or Group III-V compounds with
or without
impurities, e.g., doping materials (EPO)

257/E21.211Treatment of semiconductor body using
process other than deposition of semiconductor
material on
material, or
a substrate, diffusion or alloying of impurity
material, or
radiation treatment (EPO)

257/E21.214To change their surface-physical
characteristics or shape, e.g., etching, polishing,
cutting
(EPO)

257/E21.24 ..To form insulating layer thereon, e.g.,
for masking or by using photolithographic technique
(EPO)

257/E21.241Post-treatment (EPO)

257/E21.249Etching insulating layer by chemical or
physical means (EPO)

257/E21.254Etching organic layer (EPO)

257/E21.255By chemical means (EPO)

257/E21.256By dry-etching (EPO)

2 257/E21.318 (0 OR, 2 XR)

10721057_CLSTITLES

Class 257 : ACTIVE SOLID-STATE DEVICES
257/E21.001 PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE
OR TREATMENT OF SEMICONDUCTOR OR SOLID-STATE
DEVICES OR OF
257/E21.002 .Manufacture or treatment of semiconductor
device (EPO)
257/E21.04 ..Device having at least one potential-jump
barrier or surface barrier, e.g., PN junction,
depletion
257/E21.085 ...Device having semiconductor body comprising
Group IV elements or Group III-V compounds with or
without
257/E21.211Treatment of semiconductor body using
process other than deposition of semiconductor material
on
material, or
257/E21.317To modify their internal properties, e.g.,
to produce internal imperfections (EPO)
257/E21.318of silicon body, e.g., for gettering
(EPO)

2 257/E21.519 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E21.001 PROCESSES OR APPARATUS ADAPTED FOR MANUFACTURE
OR TREATMENT OF SEMICONDUCTOR OR SOLID-STATE DEVICES
OR OF
257/E21.002 .Manufacture or treatment of semiconductor
device (EPO)
257/E21.04 ..Device having at least one potential-jump
barrier or surface barrier, e.g., PN junction,
depletion
257/E21.499 ...Assembling semiconductor devices, e.g.,
packaging, including mounting, encapsulating, or
treatment
257/E21.506Attaching or detaching leads or other
conductive members, to be used for carrying current to
or
257/E21.519Involving application of pressure, e.g.,
thermo-compression bonding (EPO)

2 257/E21.577 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E21.531 ...For electrical parameters, e.g.,
resistance, deep-levels, CV, diffusions by
electrical means
257/E21.532 .Manufacture or treatment of devices
consisting of plurality of solid-state components
formed in
manufacture of
257/E21.536 ..Manufacture of specific parts of devices
(EPO)

10721057_CLSTITLES

257/E21.575 ...Interconnections, comprising conductors and dielectrics, for carrying current between separate components within device (EPO)
257/E21.576Characterized by formation and post treatment of dielectrics, e.g., planarizing (EPO)
257/E21.577By forming via holes (EPO)

2 257/E21.58 (0 OR, 2 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES

257/E21.531 ...For electrical parameters, e.g., resistance, deep-levels, CV, diffusions by electrical means

(EPO)

257/E21.532 .Manufacture or treatment of devices consisting of plurality of solid-state components

formed in

or on common substrate or of parts thereof;

manufacture of

integrated circuit devices or of parts thereof (EPO)

257/E21.536 ..Manufacture of specific parts of devices (EPO)

257/E21.575 ...Interconnections, comprising conductors and dielectrics, for carrying current between separate components within device (EPO)

257/E21.576Characterized by formation and post treatment of dielectrics, e.g., planarizing (EPO)

257/E21.58Planarizing dielectric (EPO)

2 257/E21.587 (0 OR, 2 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES

257/E21.531 ...For electrical parameters, e.g., resistance, deep-levels, CV, diffusions by electrical means

(EPO)

257/E21.532 .Manufacture or treatment of devices consisting of plurality of solid-state components

formed in

or on common substrate or of parts thereof;

manufacture of

integrated circuit devices or of parts thereof (EPO)

257/E21.536 ..Manufacture of specific parts of devices (EPO)

257/E21.575 ...Interconnections, comprising conductors and dielectrics, for carrying current between separate components within device (EPO)

257/E21.576Characterized by formation and post treatment of dielectrics, e.g., planarizing (EPO)

257/E21.585Filling of holes, grooves, vias or trenches with conductive material (EPO)

257/E21.587By deposition over sacrificial masking layer, e.g., lift-off (EPO)

2 257/E21.589 (0 OR, 2 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES

257/E21.531 ...For electrical parameters, e.g., resistance, deep-levels, CV, diffusions by electrical means

(EPO)

257/E21.532 .Manufacture or treatment of devices consisting of plurality of solid-state components

formed in

or on common substrate or of parts thereof;

10721057_CLSTITLES

manufacture of

- 257/E21.536 integrated circuit devices or of parts thereof (EPO)
 - ..Manufacture of specific parts of devices (EPO)
- 257/E21.575 ...Interconnections, comprising conductors and dielectrics, for carrying current between separate components within device (EPO)
- 257/E21.576 Characterized by formation and post treatment of dielectrics, e.g., planarizing (EPO)
- 257/E21.589 By forming conductive members before deposition of protective insulating material, e.g., pillars, studs (EPO)

2 257/E21.591 (0 OR, 2 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES

- 257/E21.531 ...For electrical parameters, e.g., resistance, deep-levels, CV, diffusions by electrical means (EPO)
- 257/E21.532 .Manufacture or treatment of devices consisting of plurality of solid-state components formed in or on common substrate or of parts thereof;

manufacture of

- 257/E21.536 integrated circuit devices or of parts thereof (EPO)
 - ..Manufacture of specific parts of devices (EPO)
- 257/E21.575 ...Interconnections, comprising conductors and dielectrics, for carrying current between separate components within device (EPO)
- 257/E21.576 Characterized by formation and post treatment of dielectrics, e.g., planarizing (EPO)
- 257/E21.591 Modifying pattern or conductivity of conductive members, e.g., formation of alloys, reduction of contact resistances (EPO)

2 257/E23.019 (0 OR, 2 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES

- 257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
- 257/E23.01 .Arrangements for conducting electric current to or from solid-state body in operation, e.g., leads, terminal arrangements (EPO)
- 257/E23.012 ..Consisting of lead-in layers inseparably applied to semiconductor body (EPO)
- 257/E23.019 ...Consisting of layered constructions comprising conductive layers and insulating layers, e.g., planar contacts (EPO)

2 257/E23.055 (0 OR, 2 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES

- 257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
- 257/E23.01 .Arrangements for conducting electric current to or from solid-state body in operation, e.g., leads, terminal arrangements (EPO)
- 257/E23.023 ..Consisting of soldered or bonded constructions (EPO)
- 257/E23.031 ...Lead frames or other flat leads (EPO)
- 257/E23.055 Consisting of thin flexible metallic tape with or without film carrier (EPO)

10721057_CLSTITLES

2 257/E23.065 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR
SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
257/E23.01 .Arrangements for conducting electric current
to or from solid-state body in operation, e.g., leads,
terminal arrangements (EPO)
257/E23.023 ..Consisting of soldered or bonded
constructions (EPO)
257/E23.06 . .Leads, i.e., metallizations or lead frames
on insulating substrates, e.g., chip carriers (EPO)
257/E23.065 . . .Flexible insulating substrates (EPO)

2 257/E23.068 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR
SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
257/E23.01 .Arrangements for conducting electric current
to or from solid-state body in operation, e.g., leads,
terminal arrangements (EPO)
257/E23.023 ..Consisting of soldered or bonded
constructions (EPO)
257/E23.06 . .Leads, i.e., metallizations or lead frames
on insulating substrates, e.g., chip carriers (EPO)
257/E23.068 . . .Additional leads joined to metallizations
on insulating substrate, e.g., pins, bumps, wires, flat
leads (EPO)

2 257/E23.078 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.001 PACKAGING, INTERCONNECTS, AND MARKINGS FOR
SEMICONDUCTOR OR OTHER SOLID-STATE DEVICES (EPO)
257/E23.01 .Arrangements for conducting electric current
to or from solid-state body in operation, e.g., leads,
terminal arrangements (EPO)
257/E23.078 ..Flexible arrangements, e.g., pressure
contacts without soldering (EPO)

2 257/E23.144 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.139 . .Liquid at normal operating temperature of
device (EPO)
257/E23.141 . .Arrangements for conducting electric current
within device in operation from one component to
another,
interconnections, e.g., wires, lead frames (EPO)
257/E23.142 ..Including external interconnections
consisting of multilayer structure of conductive and
insulating layers inseparably formed on semiconductor
body
(EPO)
257/E23.144 . . .Capacitive arrangements or effects of, or
between wiring layers (EPO)

2 257/E23.167 (0 OR, 2 XR)
Class 257 : ACTIVE SOLID-STATE DEVICES
257/E23.139 . .Liquid at normal operating temperature of
device (EPO)
257/E23.141 . .Arrangements for conducting electric current
within device in operation from one component to
another,
interconnections, e.g., wires, lead frames (EPO)
257/E23.142 ..Including external interconnections

10721057_CLSTITLES
consisting of multilayer structure of conductive and
insulating layers inseparably formed on semiconductor
body

(EPO)

257/E23.154 ...characterized by materials (EPO)
257/E23.167Insulating materials (EPO)

2 257/E31.112 (0 OR, 2 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES
257/E31.046Including microcrystalline Group IV
compound (e.g., c-SiGe, c-SiC) (EPO)
257/E31.11 .Detail of nonsemiconductor component of
radiation-sensitive semiconductor device (EPO)
257/E31.111 ..Input/output circuit of device (EPO)
257/E31.112 ...For device having potential or surface
barrier (EPO)

2 257/E31.131 (0 OR, 2 XR)

Class 257 : ACTIVE SOLID-STATE DEVICES
257/E31.046Including microcrystalline Group IV
compound (e.g., c-SiGe, c-SiC) (EPO)
257/E31.11 .Detail of nonsemiconductor component of
radiation-sensitive semiconductor device (EPO)
257/E31.131 ..Arrangement for temperature regulation (e.g.,
cooling, heating, or ventilating) (EPO)

2 324/715 (0 OR, 2 XR)

Class 324 : ELECTRICITY: MEASURING AND TESTING
324/600 IMPEDANCE, ADMITTANCE OR OTHER QUANTITIES
REPRESENTATIVE OF ELECTRICAL STIMULUS/RESPONSE
RELATIONSHIPS
324/649 .Lumped type parameters
324/691 ..Using resistance or conductance measurement

324/713 ...With voltage or current signal evaluation
324/715Including a particular probing technique
(e.g., four point probe)

2 335/78 (1 OR, 1 XR)

Class 335 : ELECTRICITY: MAGNETICALLY OPERATED SWITCHES,
MAGNETS, AND ELECTROMAGNETS
335/2 ELECTROMAGNETICALLY ACTUATED SWITCHES
335/78 .Polarity-responsive

2 427/124 (1 OR, 1 XR)

Class 427 : COATING PROCESSES
427/58 ELECTRICAL PRODUCT PRODUCED
427/123 .Metal coating
427/124 ..Vapor deposition or utilizing vacuum

2 427/248.1 (1 OR, 1 XR)

Class 427 : COATING PROCESSES
427/248.1 COATING BY VAPOR, GAS, OR SMOKE

2 427/250 (0 OR, 2 XR)

Class 427 : COATING PROCESSES
427/248.1 COATING BY VAPOR, GAS, OR SMOKE
427/250 .Metal coating

2 427/96.8 (0 OR, 2 XR)

Class 427 : COATING PROCESSES
427/58 ELECTRICAL PRODUCT PRODUCED
427/96.1 .Integrated circuit, printed circuit, or

10721057_CLSTITLES
circuit board

427/96.8 ..Vapor or gas deposition

2 427/98.5 (0 OR, 2 XR)
Class 427 : COATING PROCESSES
427/58 ELECTRICAL PRODUCT PRODUCED
427/96.1 .Integrated circuit, printed circuit, or
circuit board
427/98.4 ..Nonuniform or patterned coating
427/98.5 ...With pretreatment of substrate

2 428/142 (1 OR, 1 XR)
Class 428 : STOCK MATERIAL OR MISCELLANEOUS ARTICLES
428/98 STRUCTURALLY DEFINED WEB OR SHEET (E.G.,
OVERALL DIMENSION, ETC.)
428/141 .Continuous and nonuniform or irregular surface
on layer or component (e.g., roofing, etc.)
428/142 ..With transparent or protective coating

2 428/209 (2 OR, 0 XR)
Class 428 : STOCK MATERIAL OR MISCELLANEOUS ARTICLES
428/98 STRUCTURALLY DEFINED WEB OR SHEET (E.G.,
OVERALL DIMENSION, ETC.)
428/195.1 .Discontinuous or differential coating,
impregnation or bond (e.g., artwork, printing, retouched
photograph, etc.)
428/209 ..Including metal layer

2 428/323 (0 OR, 2 XR)
Class 428 : STOCK MATERIAL OR MISCELLANEOUS ARTICLES
428/221 WEB OR SHEET CONTAINING STRUCTURALLY DEFINED
ELEMENT OR COMPONENT
428/323 .Including a second component containing
structurally defined particles

2 428/411.1 (0 OR, 2 XR)
Class 428 : STOCK MATERIAL OR MISCELLANEOUS ARTICLES
428/411.1 COMPOSITE (NONSTRUCTURAL LAMINATE)

2 430/315 (1 OR, 1 XR)
Class 430 : RADIATION IMAGERY CHEMISTRY: PROCESS,
COMPOSITION, OR PRODUCT THEREOF
430/269 IMAGING AFFECTING PHYSICAL PROPERTY OF
RADIATION SENSITIVE MATERIAL, OR PRODUCING NONPLANAR
OR
PRINTING SURFACE - PROCESS, COMPOSITION, OR PRODUCT
430/311 .Making electrical device
430/313 ..With formation of resist image, and etching
of substrate or material deposition
430/315 ...Material deposition only

2 430/318 (0 OR, 2 XR)
Class 430 : RADIATION IMAGERY CHEMISTRY: PROCESS,
COMPOSITION, OR PRODUCT THEREOF
430/269 IMAGING AFFECTING PHYSICAL PROPERTY OF
RADIATION SENSITIVE MATERIAL, OR PRODUCING NONPLANAR
OR
PRINTING SURFACE - PROCESS, COMPOSITION, OR PRODUCT
430/311 .Making electrical device
430/313 ..With formation of resist image, and etching
of substrate or material deposition
430/318 ...Metal etched

10721057_CLSTITLES

2 438/107 (0 OR, 2 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/106 PACKAGING (E.G., WITH MOUNTING, ENCAPSULATING,
ETC.) OR TREATMENT OF PACKAGED SEMICONDUCTOR

438/107 .Assembly of plural semiconductive substrates
each possessing electrical device

2 438/109 (2 OR, 0 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/106 PACKAGING (E.G., WITH MOUNTING, ENCAPSULATING,
ETC.) OR TREATMENT OF PACKAGED SEMICONDUCTOR

438/107 .Assembly of plural semiconductive substrates
each possessing electrical device

438/109 ..Stacked array (e.g., rectifier, etc.)

2 438/462 (0 OR, 2 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/460 SEMICONDUCTOR SUBSTRATE DICING

438/462 .Having specified scribe region structure
(e.g., alignment mark, plural grooves, etc.)

2 438/476 (0 OR, 2 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/471 GETTERING OF SUBSTRATE

438/476 .By layers which are coated, contacted, or
diffused

2 438/612 (2 OR, 0 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/584 COATING WITH ELECTRICALLY OR THERMALLY
CONDUCTIVE MATERIAL

438/597 .To form ohmic contact to semiconductive
material

438/612 ..Forming solder contact or bonding pad

2 438/631 (1 OR, 1 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/584 COATING WITH ELECTRICALLY OR THERMALLY
CONDUCTIVE MATERIAL

438/597 .To form ohmic contact to semiconductive
material

438/618 ..Contacting multiple semiconductive regions
(i.e., interconnects)

438/622 ...Multiple metal levels, separated by
insulating layer (i.e., multiple level metallization)

438/631Having planarization step

2 438/640 (2 OR, 0 XR)
Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/584 COATING WITH ELECTRICALLY OR THERMALLY
CONDUCTIVE MATERIAL

438/597 .To form ohmic contact to semiconductive
material

438/618 ..Contacting multiple semiconductive regions
(i.e., interconnects)

438/622 ...Multiple metal levels, separated by

10721057_CLSTITLES

insulating layer (i.e., multiple level metallization)
 438/637with formation of opening (i.e., viahole)
 in insulative layer
 438/640Having viahole of tapered shape

2 438/672 (0 OR, 2 XR)
 Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/584 COATING WITH ELECTRICALLY OR THERMALLY CONDUCTIVE MATERIAL
 438/597 .To form ohmic contact to semiconductive material
 438/669 ..And patterning of conductive layer
 438/672 ...Plug formation (i.e., in viahole)

2 438/678 (0 OR, 2 XR)
 Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/584 COATING WITH ELECTRICALLY OR THERMALLY CONDUCTIVE MATERIAL
 438/597 .To form ohmic contact to semiconductive material
 438/678 ..Electroless deposition of conductive layer

2 438/688 (0 OR, 2 XR)
 Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/584 COATING WITH ELECTRICALLY OR THERMALLY CONDUCTIVE MATERIAL
 438/597 .To form ohmic contact to semiconductive material
 438/688 ..Aluminum or aluminum alloy conductor

2 438/693 (2 OR, 0 XR)
 Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/689 CHEMICAL ETCHING
 438/690 .Combined with the removal of material by nonchemical means (e.g., ablating, abrading, etc.)
 438/691 ..Combined mechanical and chemical material removal
 438/692 ...Simultaneous (e.g., chemical-mechanical polishing, etc.)
 438/693Utilizing particulate abradant

2 438/725 (0 OR, 2 XR)
 Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/689 CHEMICAL ETCHING
 438/706 .Vapor phase etching (i.e., dry etching)
 438/707 ..Utilizing electromagnetic or wave energy
 438/710 ...By creating electric field (e.g., plasma, glow discharge, etc.)
 438/725Organic material (e.g., resist, etc.)

2 438/734 (0 OR, 2 XR)
 Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/689 CHEMICAL ETCHING
 438/706 .Vapor phase etching (i.e., dry etching)
 438/734 ..Sequential etching steps on a single layer

2 438/759 (0 OR, 2 XR)

10721057_CLSTITLES

Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/758 COATING OF SUBSTRATE CONTAINING SEMICONDUCTOR
REGION OR OF SEMICONDUCTOR SUBSTRATE

438/759 .Combined with the removal of material by
nonchemical means

2 438/945 (0 OR, 2 XR)

Class 438 : SEMICONDUCTOR DEVICE MANUFACTURING: PROCESS

438/942 MASKING

438/945 .Special (e.g., metal, etc.)

2 451/36 (0 OR, 2 XR)

Class 451 : ABRADING

451/28 ABRADING PROCESS

451/36 .Utilizing fluent abradant

2 451/56 (1 OR, 1 XR)

Class 451 : ABRADING

451/28 ABRADING PROCESS

451/56 .With tool treating or forming